

IRRIGATION ARRANGEMENTS IN FORSYTH COUNTY, NORTH CAROLINA

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INSTITUTE OF GOVERNMENT
UNIVERSITY OF NORTH CAROLINA

**U.N.C. WATER
RESOURCE PAPERS
Number 5**

IRRIGATION ARRANGEMENTS IN
FORSYTH COUNTY, NORTH CAROLINA

A Report of an Irrigation Survey in Forsyth
County, Conducted in the Summer of 1962

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Introduction

This is one of a group of reports of irrigation surveys made in the summer of 1962 covering eleven North Carolina counties. The surveys are part of a research project concerning arrangements by water users in selected areas of North Carolina to secure water sources. Conducting the surveys was James E. Martin, Jr., currently a second-year law student at the University of North Carolina, under the supervision of Milton S. Heath, Jr.*

Briefly, the purpose of the irrigation surveys is to examine and analyze the following factors:

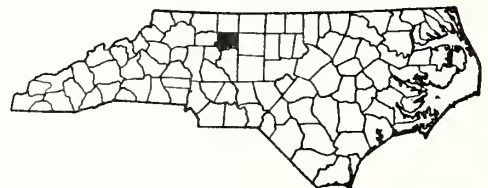
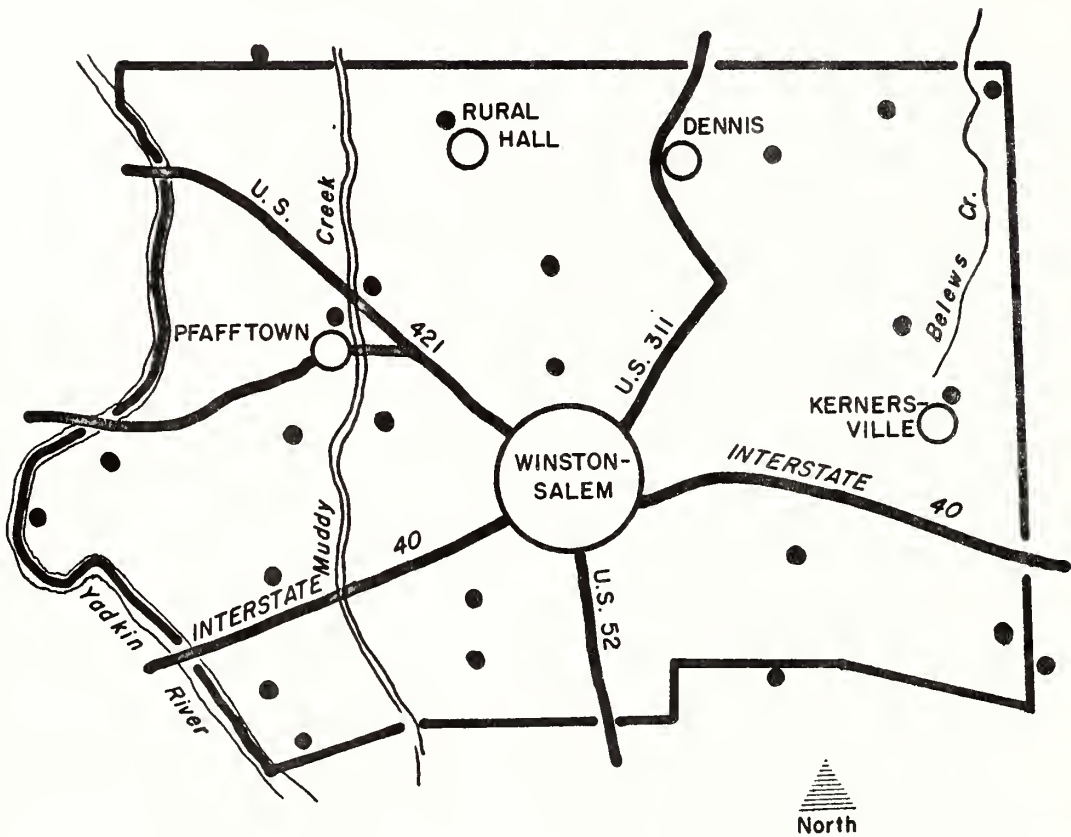
- .The nature and magnitude of farm irrigation in selected areas.
- .The types of crops irrigated.
- .The sources of water used.
- .The legal arrangements made by the irrigators to secure their sources of water, including purchase of land or water rights, agreements among irrigators and other water users concerning water use, permits required, etc.
- .Any disputes that may have arisen over sources of water affecting these irrigators, and the outcome of the disputes.

With this and other information developed through the research project, it is hoped that an accurate evaluation can be made of the operation of the existing structure of laws and political institutions affecting water use, of its weaknesses and strengths, and of its impact on water resource development.

The procedures followed in this survey are described in detail by Water Resource Paper No. 2. Briefly, the known irrigators were identified with the assistance of county agents and Soil Conservation Service personnel, and then were personally interviewed. A prepared questionnaire was used as a point of departure for the interviews.

*Water Resource Paper No. 1 contains a description of the over-all research project. Water Resource Paper No. 2 summarizes the 1962 irrigation surveys and reviews the procedures followed on the surveys.

IRRIGATION IN FORSYTH COUNTY



Key:

- REPRESENTS AN ACTIVE IRRIGATOR WHO WAS CONTACTED IN THIS SURVEY DURING THE SUMMER OF 1962.

General Review of Irrigation
in Forsyth County

There are an estimated fifty irrigators in Forsyth County. In this survey fifty-six persons were contacted of whom thirty-two were active irrigators. The majority of those irrigating have spring or branch fed farm ponds though some irrigate directly from streams. While most of the irrigators used their systems on such money crops as tobacco, truck gardens, or in nurseries, a fair number irrigates pastures and forage. Most persons surveyed had owned their systems for six or seven years and were not planning to expand them. Some had sold their systems or were planning to do so if possible; these were largely dairy farmers, numbering less than ten. There are no areas of great concentration for irrigation in the county, and there appears to be sufficient water for irrigation on the present scale without risk of significant conflicts.

Summarized Results of Survey

1. Extent of coverage

Suggested list of irrigators (SCS Unit Conservationist and County Extension Chairman)--69

Farms reporting irrigation in 1959 U. S. Census of Agriculture--46

Active irrigators contacted--32

Persons contacted--56

Estimated number of irrigators in Forsyth County (authors' estimate)--50

2. Time required for conduct of survey in Forsyth County

5-1/2 days for interviewing irrigators and others

3. Water sources

Ponds--28

Continuous Flow Ponds--27

Surface Ponds--3

Combination Usage--2

Streams--12

Wells--1

Combination of Sources (ponds, streams, wells)--9

Note: The information concerning water sources, including the classification of types of ponds, was derived from the irrigators themselves, not from personal inspection by the authors. An explanation of the terminology used here--e.g., "continuous flow ponds"--will be found in U.N.C. Water Resource Paper No. 2.

4. Types of crops

Tobacco (20 farms)

Largest farm--20 acres

Smallest farm--1.5 acres

Average farm--6.275 acres

Pasture (10 farms)

Largest farm--50 acres

Smallest farm--5 acres

Average farm--24.8 acres

Nursery (3 farms)

Largest farm--15 acres

Smallest farm--5 acres

Average farm--8.333 acres

Miscellaneous (5 farms which include an 18 acre truck farm, gardens, lawns, etc.)

5. Water usage

There are no reliable data available concerning the amount of water used for irrigation in the area and no mechanical measuring devices are in use. (See Water Resource Paper No. 2 for further comment.)

6. Expansion

No expansion planned--31

Expansion planned (indefinite)--1

One non-irrigator planned to buy a system when funds became available. It should be considered that there has been no sustained drought in this area in the last four or five years.

7. Disputes over water, etc.

None reported

8. Purchase of water rights or agreements concerning irrigation

One farmer of the Dennis Community shares as a common boundary with a neighbor a stream from which they both irrigate tobacco; there is sufficient water and they have had no problems.

Two adjoining farmers of the Muddy Creek section have an informal written agreement concerning a pond which is divided $1/3$ - $2/3$ by their boundary line. The agreement provides that each shall have equal rights to the water therein.

9. Acquisition of riparian lands, easements, etc.

None reported

10. Recent irrigation trends

Apparently the dry periods of 1961 and 1962 have done little to change the existing irrigation practices or situation in Forsyth County. There has been no new equipment purchased except in the cases of three tobacco farmers (5 sprinklers, 100 ft. pipe, and another who bought a repair kit). One of the largest dealers in the area reported that it has not stocked irrigation systems in over five years, whereas prior to that time they stocked several and re-ordered frequently.

Acknowledgments

SCS Unit Conservationist Anthony J. Ernstes and County Extension Chairman F. H. Harmon gave us invaluable help in identifying and locating irrigators. We are very grateful to them, and to State Conservationist Richard M. Dailey and Howard Ellis of the State College Department of Engineering Extension for their usual generous co-operation.

The map at page 3 was prepared by Charles Nakamura of the Institute of Government.

